



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,898	12/22/2004	Satoshi Mizutani	112857-485	2740
29175 7590 10/02/2008 BELI., BOYD & LLOYD, LLP P. O. BOX 1135 CHICAGO, IL 60690				
EXAMINER				
MARTIN, ANGELA J				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
10/02/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/519,898

**Applicant(s)**

MIZUTANI ET AL.

**Examiner**

ANGELA J. MARTIN

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) 35-44 and 51-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-34 and 45-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/2/08/1/31/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I (claims 29-34 and 45-50) in the reply filed on 8/26/08 is acknowledged.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 29-34 and 45-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawakami et al., U.S. Pat. No. 6,949,312 B1.

Claims 29-34 drawn to an anode active material; claims 45-50 drawn to a nonaqueous electrolyte secondary battery comprising the anode.

Kawakami et al., teach an anode active material comprising: an alloy material including an element M capable of being alloyed with lithium selected from metal elements and metalloid elements and at least one kind of element R selected from elements with an atomic number of 20 or less, except for hydrogen, lithium and a noble gas (abstract; X in Kawakami et al., equivalent to R in application; A in Kawakami et al., equivalent to M in application), wherein the content of the element R ranges from about 1 wt % to about 30 wt % (col. 13, lines 11-13). An anode active material according to claim 29, wherein a reactive phase with lithium is included and a half-width of a diffraction peak obtained by X-ray diffraction analysis of the reactive phase is about 0.5.degree. or more (col. 10, lines 13-21). An anode active material according to claim 29, wherein as the element R, at least one kind selected from the group consisting of boron, carbon, aluminum, silicon, phosphorus and sulfur is included (abstract; X in Kawakami et al., equivalent to R in application; A in Kawakami et al., equivalent to M in application). An anode active material according to claim 29, wherein as the element M, tin and at least one kind selected from the group consisting of nickel, copper, iron, cobalt, manganese, zinc, indium and silver are included (col. 10, lines 1-5). An anode active material according to claim 29, wherein the specific surface area ranges from about 1.0 m.sup.2/g to about 70 m.sup.2/g (col. 10, lines 23-26). An anode active material according to claim 29, wherein the median size is about 50 .mu.m or less (col. 10, lines 18-22). A nonaqueous electrolyte secondary battery, comprising: a cathode; an anode; and a nonaqueous

electrolyte, wherein the anode includes an alloy material including an element M capable of being alloyed with lithium selected from metal elements and metalloid elements and at least one kind of element R selected from elements with an atomic number of 20 or less except for hydrogen, lithium and a noble gas (abstract), wherein a content of the element R in the alloy material ranges from about 10 wt % to about 50 wt % (col. 13, lines 11-13). A nonaqueous electrolyte secondary battery according to claim 45, wherein the alloy material includes a reactive phase with lithium, and the half-width of a diffraction peak obtained by X-ray diffraction analysis of the reactive phase is about 0.5.degree. or more (col. 10, lines 13-21). An nonaqueous electrolyte secondary battery according to claim 45, wherein the alloy material includes at least one kind selected from the group consisting of boron, carbon, aluminum, silicon, phosphorus and sulfur (abstract; X in Kawakami et al., equivalent to R in application; A in Kawakami et al., equivalent to M in application). An nonaqueous electrolyte secondary battery according to claim 45, wherein the alloy material includes tin and at least one kind selected from the group consisting of nickel, copper, iron, cobalt, manganese, zinc, indium and silver as the element M (col. 10, lines 1-5). A nonaqueous electrolyte secondary battery according to claim 45, wherein in the alloy material, a specific surface area ranges from about 1.0 m.sup.2/g to about 70 m.sup.2/g (col. 10, lines 23-26). A nonaqueous electrolyte secondary battery according to claim 45, wherein in the alloy material, the median size is about 50 .mu.m or less (col. 10, lines 18-22).

Thus, the claims are anticipated.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELA J. MARTIN whose telephone number is (571)272-1288. The examiner can normally be reached on Monday-Friday from 10:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJM  
/Angela J. Martin/  
Examiner, Art Unit 1795

Application/Control Number: 10/519,898  
Art Unit: 1795

Page 6